Chapter 8: Reviewing Existing Performance Measures

This chapter describes the performance measures EPA's Superfund program is currently using to monitor and evaluate program performance. As described below and elsewhere in this report, the study team commends the work all the programs are doing to strengthen their performance measures. Even so, the team has identified several specific areas for additional review and encourages the use of benchmarking as a way to identify opportunities for improvement.

GPRA Superfund Performance Measures

EPA primarily uses two types of performance measures to foster accountability. One series of measures is in response to the Government Performance Results Act (GPRA). These measures are highly visible and must be reported annually to Congress in the President's Budget. "GPRA measures hold federal agencies accountable for using resources wisely and achieving program results. GPRA requires agencies to develop plans for what they intend to accomplish, measure how well they are doing, make appropriate decisions based on the information they have gathered, and communicate information about their performance to Congress and to the public." [2] The other types of performance measures are used internally by each program office to measure performance.

Currently, GPRA Superfund performance measures exist for the Office of Solid Waste and Emergency Response (OSWER), the Office of Enforcement and Compliance Assurance (OECA), and the Office of Research and Development (ORD). These measures are found under the strategic goal Land Preservation and Restoration. (See Appendix X for complete set of Superfund GPRA measures.)

Over the years, the performance measures the Superfund program uses have shifted focus from tracking outputs to outcome-oriented, or results-oriented, measures (e.g., Superfund Environmental Indicators). This is particularly true for OSWER. This evolution continues with new GPRA measures in FY 2004 that focus on outcome-oriented measures. [3]

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[2] *Superfund Program Implementation Manual FY 04/05*, Appendix G: Government Performance Results Act (GPRA), OSWER Directive 9200-3-14-IG-Q, April 7, 2003, page G- 2

[3] Ibid, page G-1

While its strategic measures are still evolving, OSWER has identified seven measures under the above strategic goal for FY 2004:

1. performing site assessments and making final assessment decisions,
2. initiating removal response actions,
3. selecting final remedies designed to clean up contamination to risk levels that are protective of human health and the environment and appropriate for reasonably anticipated future land use,
4. completing construction of the selected remedies,
5. protecting the public from the health effects of exposure to contamination,
6. controlling the migration of contaminated groundwater, and
7. returning land to productive uses by cleaning up contamination to risk levels appropriate for reasonably anticipated future land uses. [4]

Of these strategic targets, (3) and (7) were added in FY 2004 while (5) and (6) were introduced in FY 2002. Discussions with OSWER staff indicate that their ultimate goal is to be able to develop measures that are more outcome-oriented, such as "lives saved" and other future-oriented outcome measures that result from program site assessment and cleanup activities.

Under this strategic goal, OECA has two GPRA measures with the following targets:

1. Each year through 2008, reach a settlement or take an enforcement action before the start of a remedial action at 90 percent of Superfund sites having viable, liable responsible parties other than the federal government.

2. Each year through 2008, address all statute of limitations cases for Superfund sites with unaddressed total past costs equal to or greater than $200,000.

Finally, ORD has two GPRA targets and associated measures:

1. Provide Science to Preserve and Remediate Land. Through 2008, provide sound science and constantly integrate smarter technical solutions and protection strategies that enhance EPA's ability to preserve land quality and remediate contaminated land for beneficial reuse.

2. Conduct Research to Support Land Activities. Through 2008, conduct sound, leading-edge scientific research to provide a foundation for preserving land quality and remediating land. Research will result in documented methods, models, assessments, and risk management options for program and regional offices, facilitating their accurate evaluation of effects on human health and the environment, understanding of exposure pathways, and implementation of effective risk management options. Conduct research affecting Indian country in partnership with tribes.

[4]Ibid, page G-2

Specific Superfund GPRA measures and associated targets do not exist for the Agency's management and support functions.

Superfund Internal Performance Measures

EPA program offices also use numerous internal measures to track performance. For example, OSWER tracks Superfund program outputs, such as:

- number of sites (i.e., total National Priorities List (NPL) sites, proposed for listing, final, and deleted);
- NPL pipeline (e.g., constructions completed);
- starts (e.g., remedial investigation/feasibility studies (RI/FSs), remedial designs);
- completions (e.g., records of decisions, NPL removals);
- starts and completions by fiscal year; and
- number of ongoing projects (RI/FSs, remedial designs, and remedial actions).

OECA has a long list of internal measures to track performance, some of which are:

- potentially responsible party (PRP) search starts;
- PRP search completions;
- maximizing PRP involvement/enforcement first;
- using special accounts for site cleanup; and
- ensuring compliance with orders/settlements.

A complete list of measures appears in Appendices H, I and J.

ORD also has several internal performance measures built around completing research projects in particular areas. These include:

- By 2010, improve the range and scientific foundation for remedy selection options for contaminated sediments by improving risk and site characterization and increasing understanding of different remedial options, in order to optimize protection of human health and the environment and the cost-effectiveness of remedial decisions.

- By 2010, provide documented performance and cost information for at least 8 alternatives to pump-and-treat remedies and at least 6 tools for characterization and assessment that the program office can incorporate in guidance.

- By 2010, provide 25 tools and methods that will allow the Agency to accurately and efficiently assess, remediate, and manage the soil and land in a healthy, productive, and sustainable state.

- By 2010, provide 40 scientific tools, methods, and models, as well as technical support to: (1) characterize the nature and extent of multimedia site contamination; (2) assess, predict, and communicate risks to human health and the environment; (3) evaluate innovative characterization and remediation options;

(4) develop testing protocols and risk management strategies; and (5) identify the fate and effects of oil spills.

Although not specific to Superfund, all of the management and support offices have internal performance measures that affect the program's efficiency and effectiveness.

Observations Regarding Program Performance Measures

An OSWER workgroup is currently exploring a variety of options to measure environmental outcomes as well as the use of efficiency measures. OSWER also is using analytical tools to initiate discussions with the Regions regarding program performance. OSWER does not appear to have internal performance measures for some of its functions, such as technology innovation and information management.

ORD's current performance measures do not appear to be results- or outcome-oriented. Instead, ORD's measures focus on completing sound research projects. However, the study team understands that ORD is in the process of examining their current measures and modifying where appropriate to become results- or outcome-oriented.

The study team does not know whether the performance measures of EPA's management and support organizations are consistent with the needs of the organizations' clients. The study team did not address this issue, but a review may be appropriate.

This project also has recommended several areas where additional measures could be used to enhance the performance of the Superfund program. As described elsewhere, they include:

- OSWER and the lead Region should lead an effort to develop performance measures that are consistent with the established (program) goals. For example, if the Agency decides to count cleanups, no matter what the source, the performance measure would include NPL construction completions, Superfund Alternative Site completions, removals that encompass all work necessary to clean up an NPL site, and voluntary cleanups.

- OSWER and OECA should build upon their work to improve and strengthen performance measurement by establishing measures that encourage the various cleanup approaches to complement each other. For example, OSWER should consider adopting a measure that treats a Superfund Alternative Site completion like an NPL construction completion, and an NPL construction completion like a fully protective removal action. OSWER should consider broadening this measure to incorporate Resource Conservation and Recovery Act corrective actions under a "one cleanup" umbrella.

- To complement key program goals, all national program managers with Superfund resources should adopt and track a manageable number of meaningful measures; ensure data systems are in place to facilitate timely and accurate

reporting; and consider using measures beyond traditional cleanup milestones, including financial management, resource utilization, cost recovery effectiveness, and site-specific charging.

- OSWER and OECA should consider adopting goals that cut across different program activities (e.g., cleanup completions through use of any tool or combination of tools) to improve teamwork and gain full recognition for the Agency's work.

- OECA and the lead Region should evaluate current enforcement measures and develop additional regional site-specific measures that provide a more accurate picture of program success.

- OECA should establish a performance measure for tracking the establishment of special accounts in conjunction with PRP settlements.

- OSWER and the Regions need to work together to establish performance measures for Superfund state contracts.

Program or Functional Efficiencies

Employing and tracking program or functional efficiencies appear to be just getting started within the Agency. As part of the Office of Management and Budget's Performance Assessment Rating Tool (PART) initiative, program offices must now develop efficiency and program outcome measures. Other than anecdotal references (plus common sense), the Superfund program does not currently appear to have a mechanism for quantitatively measuring whether program efficiencies have occurred, and if so, where, to what extent, and why.

To comply with OMB's PART initiative, the Superfund program has developed measures for the removal program in the PART and is working on developing measures for the remedial program. The PART requires an agency to identify measures addressing program purpose and design, strategic planning, program management, and program results and accountability. These areas are tracked and scored on a yearly basis.

Similar efficiency measures could also be used possibly for enforcement, lab support, and management and support activities. While management and support activities are much more difficult to measure than other activities, they are not impossible to measure, particularly in such areas as contracts management and grants management. OARM is already tracking certain performance measures. Additional measures could include efficiency measures associated with the number of full-time-equivalent (FTE) positions required for each new contract acquisition, and the potential cost savings to the government for new versus replaced contracts.

Benchmarking Studies

Benchmarking can be defined as the continuous process of measuring producers, services, and practices against strong competitors or recognized industry leaders. This ongoing activity, which is intended to improve performance, can be applied to all facets of an operation. Benchmarking studies could prove very useful in not only measuring efficiency, but also fostering a sense of competition and innovation.

Benchmarking requires a mechanism for identifying and measuring performance and differences in performance. It focuses on comparing best practices among organizations with similar functions or dissimilar organizations with similar functions.

Benchmarking enables organizations to identify who is performing well and, with subsequent research, why. By understanding why, other organizations performing similar functions can identify and possibly adopt best practices to foster continuous improvements throughout their organizations.

Benchmarking does not appear to be a common practice within EPA. However, discussions indicate an OSWER workgroup is currently exploring options concerning efficiency measures, including possibly using benchmarking within the program.

While benchmarking is quantitatively oriented, it need not always be. By posing the right questions, organizations can identify the processes that are fostering improvement or lack of improvement, and modify their processes to achieve the desired outcomes.

At issue is the importance of measuring the efficiency of operations within EPA and, in particular, the Superfund program. On the one hand, benchmarking particular functions or operations to establish baselines of performance and incremental changes can foster a sense of competition, incentives, innovation, and accountability. On the other hand, these efforts do not come cheaply, nor are they easy to implement without careful planning. To a great extent, incorporating bench marking into an organizational culture can be difficult to implement without strong and continuous leadership.

Recommendations for Superfund Performance Measures

The performance measures used by the EPA program offices appear to be relevant, for the most part, to achieving the goals of the Superfund program. However, as with every organization, improvements appear possible. At issue are the costs and benefits of investing in this area relative to other program activities.

The objectives of ORD's Superfund research program are to reduce the cost of cleaning up Superfund sites, improve the efficiency of characterizing and remediating sites, and reduce the scientific uncertainties for improved decision making at Superfund sites. ORD could build upon these objectives and possibly develop results-oriented or even outcome-oriented measures.

For instance, ORD has highlighted that the Superfund Innovative Technology Evaluation program has resulted in $2.4 billion over the years in cleanup cost savings through EPA and PRPs utilizing innovative technologies evaluated by them. ORD could set a target of $X in cleanup cost savings per year. Similarly, ORD could apply a measure showing the reduced time required to characterize or remediate sites as a result of implementing models or methodologies developed by them. Finally, ORD provides the Regions with site-specific technical support. ORD could set a target of providing technical support to X sites per year resulting in $X saved in cleanup costs, or X amount of time in characterizing sites, or X number of sites with reduced risks to human health or the environment as a result of their technical support.

Recommendation 100: ORD should continue their internal review and revise, where appropriate, their Superfund performance measures to become more program results-oriented.

Similarly, OSWER should examine the feasibility of developing outcome-oriented performance measures for its technology innovation activities.

The study team recognizes OSWER's efforts toward developing efficiency measures for the Superfund program. Whether through benchmarking, use of efficiency measures, or other approaches, the objectives are the same: foster a sense of continuous improvement, understand the factors that influence variations in performance, foster innovation, share those observations or best practices, and ultimately foster greater program effectiveness and efficiency.

Recommendation 101: OSWER and OECA (and possibly other offices as well) should initiate a benchmarking study associated with an important Superfund operation or function, such as RI/FSs or PRP searches in order to improve the Superfund program's efficiency, foster opportunities for innovation, and adopt best management practices.

Recommendation 102: EPA's management and support offices should meet with their Superfund response and enforcement clients to review current measures and possibly establish new performance measures specific to the Superfund program, such as on special accounts and cost recovery in order to increase the Superfund program's integration and efficiency.